

CAUTION!

PLEASE SWITCH POWER OFF
BEFORE SERVICING UNIT

Commercial Freezer

Service Manual

SOLID DOOR TOP MOUNT REACH-IN

PTM23F



Please read this manual completely before attempting to install or operate this equipment.

TABLE OF CONTENTS

1. FEATURE CHART

1-1. OUTSIDE DRAWING AND MEASUREMENT FOR PTM23F

2. WIRING DIAGRAM

2-1. FREEZER (1 DOOR): PTM23F

3. PARTS DETAILS

3-1. TOP PANEL

3-2. REFRIGERATION COMPARTMENT

3-3. DOOR

3-4. COOLING COMPARTMENT

4. MAIN COMPONENTS

4-1. COMPRESSOR

4-2. COMPRESSOR RELAY

4-3. CONDENSER DRYER

4-4. CAPACITOR

4-5. EVAPORATOR FAN MOTOR

4-6. CONDENSER FAN MOTOR

4-7. EVAPORATOR DEFROST HEATER

4-8. LAMP

4-9. THERMOSTAT

5. ELECTRONIC CONTROLLER INSTRUCTION

5-1. REFRIGERATOR CONTROLLER

5-1-1. DIXELL XR60C PARAMETER FOR FREEZER PTM23F

5-1-2. HOW TO USE THE CONTROLLER

6. REPLACEMENT OF MAIN COMPONENTS

6-1. BOTTOM PANEL PARTS

6-2. REFRIGERATION COMPARTMENT PARTS

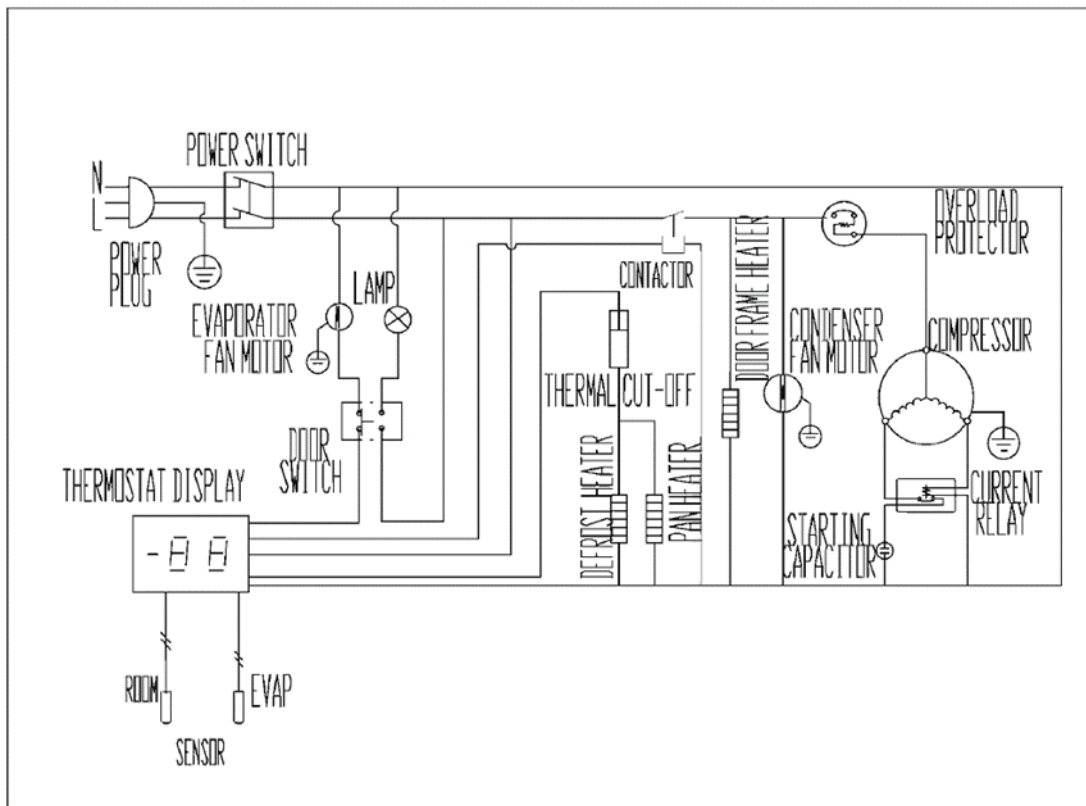
6-3. CONDENSING UNIT

1-1. OUTSIDE DRAWING OF PTM23F



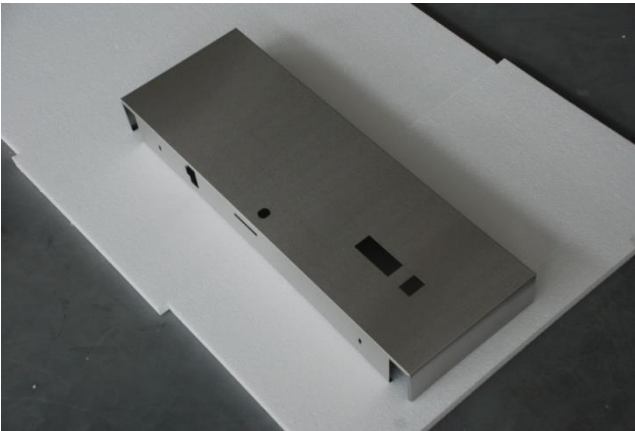
2. WIRING DIAGRAM

2-1. PTM23F

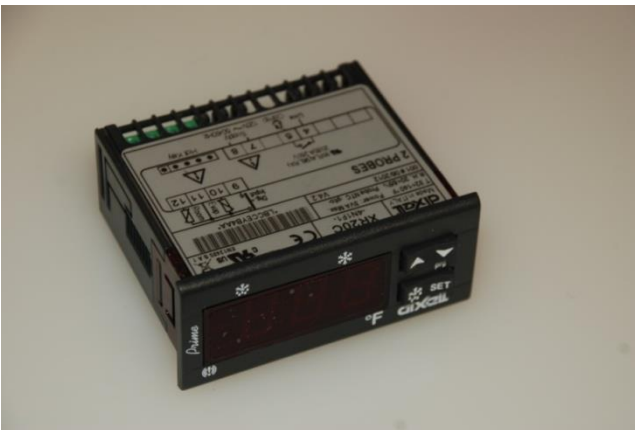


3. PARTS DETAILS

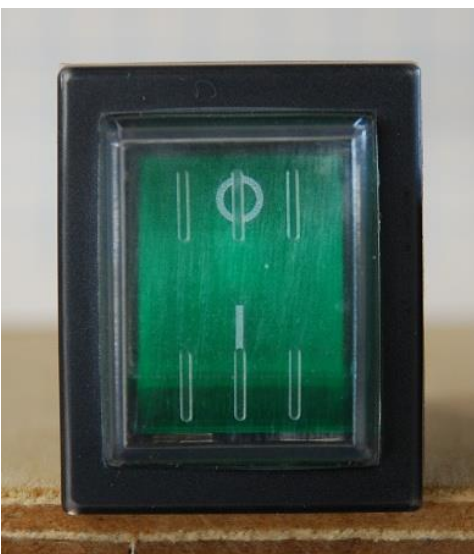
3-1. TOP PANEL



THERMOSTAT



MAIN SWITCH



DOOR SWITCH



LOCK

3-2. REFRIGERATION COMPARTMENT CYCLE ASSEMBLY



CONDENSER

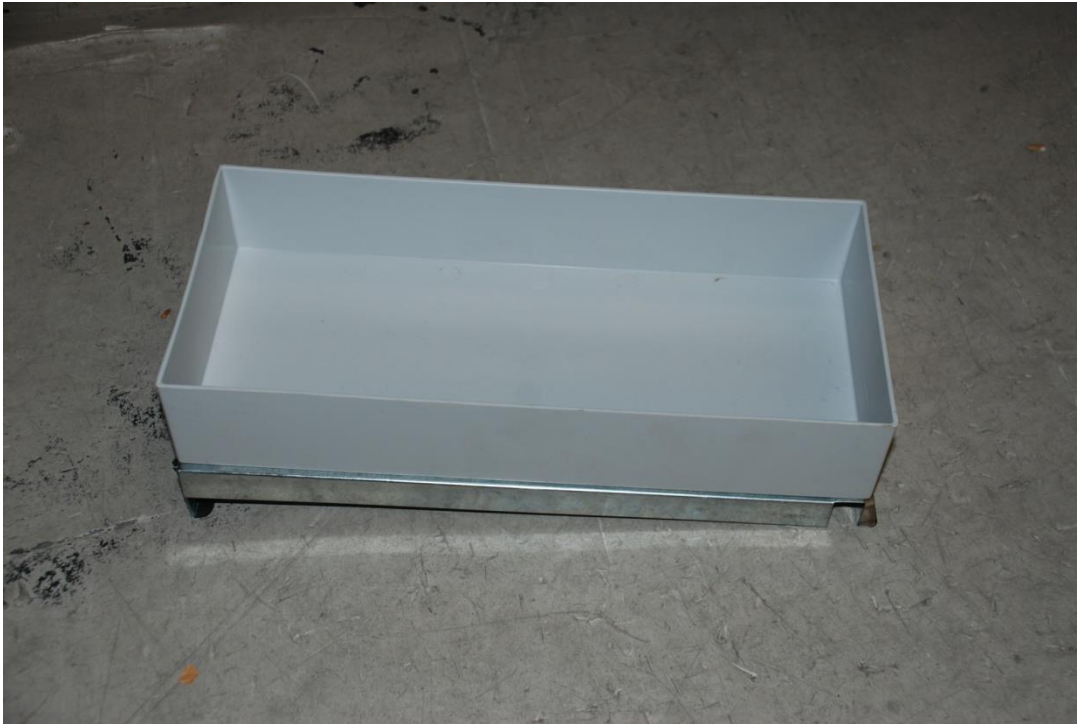
FILTER DRIER

CONDENSER FAN MOTOR

WATER PAN

COMPRESSOR

DRAIN PAN



CONDENSER FAN MOTOR ASSEMBLY



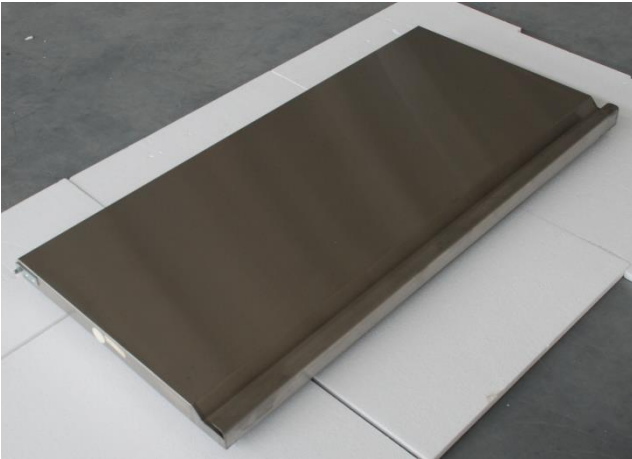
FAN COVER

CONDENSER FAN MOTOR BLADE



CONDENSER FAN MOTOR

3-3. DOOR



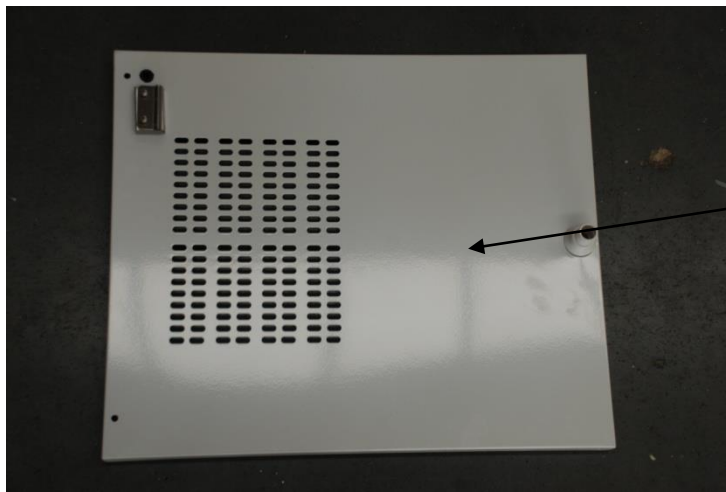
GASKET



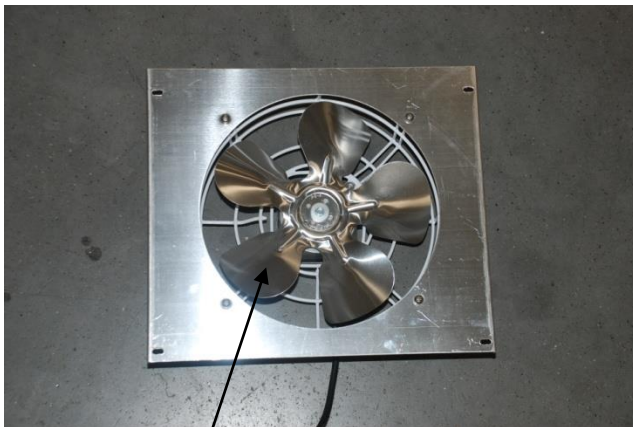
Magnetic gasket can be replaced without any tools.



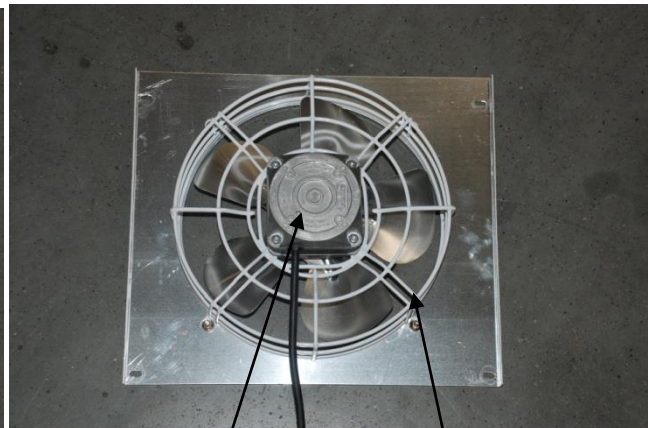
3-4. COOLING COMPARTMENT



Circle Fan Cover



Evaporator Fan Motor Blade

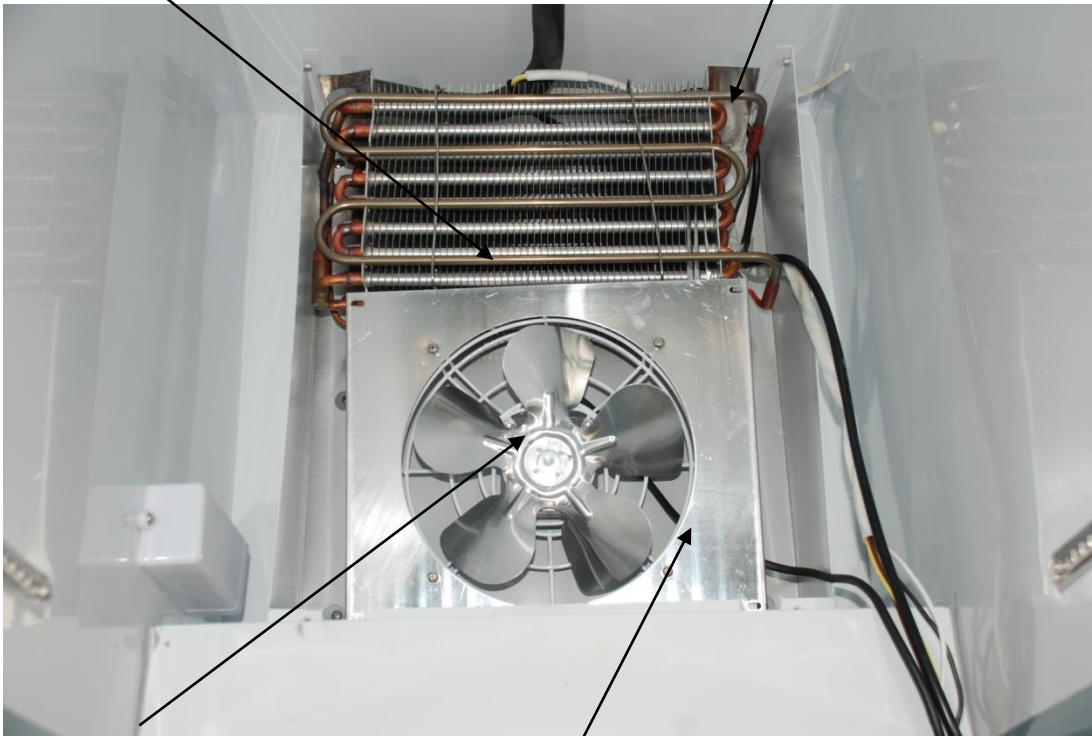


Evaporator Fan Motor

Fan Cover

Evaporator

Defrost Heating Element



Evaporator Fan

Fan Support

4. MAIN COMPONENTS

4-1. COMPRESSOR

MODEL	PTM23F
Refrigerant	R-404a
Voltage	115V/60Hz
Comp. Model	T2168GK
Part code	27F.12

4-2. COMPRESSOR RELAY

	PTM23F
Voltage	115V / 60Hz
Relay Model	HLC-1XT04XA
Part code	27F.03

4-3. CONDENSER DRYER

MODEL	PTM23F
Refrigerant	R-404a
Spec.	XH-9 25g
Part code	GN1410TN.14

4-4. CAPACITOR

MODEL	PTM23F
Voltage	115V / 60Hz
Running	X
Starting	145-174μf

4-5. EVAPORATOR FAN MOTOR

MODEL	PTM23F
Voltage	115V / 60Hz
Motor Model	CA27-04/C20
Part code	27R.30

4-6. CONDENSER FAN MOTOR

MODEL	PTM23F
Voltage	115V / 60Hz
Motor Model	CA27-04/C19
Part code	27R.32

4-7. EVAPORATOR DEFROST HEATER

MODEL	PTM23F
Voltage	115V / 60Hz
Spec.	550
Part code	27F.04

4-8. LAMP BULB

MODEL	PTM23F
Voltage	115V/60Hz
Spec.	25W
Part code	27R.29

4-9. MAIN PCB

MODEL	PTM23F
Voltage	115V / 60Hz
Part code	XR60CX
Micom code	27F.11

5. ELECTRONIC CONTROLLER INSTRUCTION

5-1-1

DIXELL XR60C PARAMETER FOR PTM23F

NO.	CODE	PARAMETER	SET(°F)
1	Set	Main Set point	-7
2	Hy	Differential(hysteresis)	4
3	LS	Lower limit of main set point	-11
4	US	Upper limit of main set point	-1
5	Ot	Offset	-1
6	P2P	Evaporator probe presence	Y
7	OE	Evaporator probe calibration	0.0
8	P3P	Condenser probe presence	Y
9	P3F	Condenser probe function	Au2
10	O3	Condenser probe calibration	0
11	Ods	Outputs delay at start up	0
12	AC	Minimum time interval between the deactivation and successive activation on compressor	5
13	CCt	Continuous cycle duration	0
14	Con	Compressor on-time during probe failure	10
15	COF	Compressor off-time during probe failure	10
16	CF	Unit of measure	°F
17	rES	Resolution	dE
18	Lod	Probe displayed	P1
19	tdF	Defrost type	EL
20	dtE	Defrost-end temperature	45
21	ldF	Time interval between defrost cycle	6.0
22	MdF	Max defrost cycle time	20
23	dSd	Start defrost delay	0
24	dFd	Displaying during defrost	it
25	dAd	Real temperature display delay at defrost end	0
26	Fdt	Dripping time	2
27	dPo	First defrost cycle after controller start up	n
28	dAF	Defrost delay after fast freezing	0
29	Fnc	Fan operating mode during normal controller	o-n
30	Fnd	Fan activation delay at controller startup and after defrost	2
31	FSt	Fan stop temperature	54
32	ALC	Temperature alarms configuration	rE
33	ALU	Max temperature alarm differential	90
34	ALL	Minimum temperature alarm differential	0

35	ALd	Minimum or minimum temperature alarm delay	99
36	dAO	Delay of temperature alarm at start up	1h
37	AU2	Condenser alarm temperature	144
38	ACH	Condenser alarm differential	8
39	Ad2	Condenser alarm delay	0
40	dA2	Delay of condenser temperature alarm at start up	0
41	AC2	Compressor stop for condenser alarm	AUt
42	Pbc	Kind of probe	ntc

5-1-2.

1. FRONT PANEL COMMANDS



SET: To display target set point, select a parameter or confirm an operation in programming mode.

- (DEF)** To start a manual defrost
- (UP)** To view the last alarm occurrence. In programming mode, it browses the parameter codes or increases the display value
- (DOWN)** To view the last alarm occurrence. In programming mode, it browses the parameter codes or decreases the display value

KEY COMBINATION

- + To lock & unlock the keyboard
- SET** + To enter in programming mode
- SET** + To return to the room temperature display

1.1 Function of LEDS

LED	MODE	FUNCTION
	ON	Compressor enabled
	Flashing	-Programming Phase (flashing with) - Anti-short cycle delay enabled
	ON	Defrost enabled
	Flashing	- Programming Phase (flashing with) - Drip time in progress
	ON	Fans enabled
	Flashing	Fans delay after defrost in progress.
	ON	A temperature alarm occurred

2. MAIN FUNCTIONS

2.1 HOW TO VIEW THE SET POINT

1. Push and immediately release the **SET** key: the display will show the set point value.
2. Push and immediately release the **SET** key or wait for 5 seconds to display the sensor value again.



2.2 HOW TO CHANGE THE SET POINT

1. Push the **SET** key for more than 2 seconds to change the set point value.
2. The value of the set point will be displayed and the ❄️ LED starts blinking.
3. To change the set value, push the ▲ or ▼ key within 10s.
4. To set new point value, push the SET key again or wait 10s.

2.3 HOW TO START A MANUAL DEFROST

Push the ❄️ key for more than 2 seconds and a manual defrost will start



2.4 HOW TO LOCK THE KEYBOARD

1. Hold the ▲ and ▼ keys for more than 3s.
2. The "POF" message will be displayed and the keyboard will be locked. At this point, it will be possible only to see the set point or the MAX or Min temperature stored.
3. If a key is pressed more than 3s the "POF" message will be displayed.



2.5 HOW TO UNLOCK THE KEYBOARD

Hold the ▲ and ▼ keys together for more than 3s, till the "POF" message is displayed.

3. ALARM SIGNALS

HOW TO VIEW THE ALARM AND RESET THE RECORDED ALARM

1. Hold the ▲ or ▼ key to display the alarm signals.
2. When the signal is displayed, hold the **SET** key until the "rst" message is displayed. Push the **SET** key again. The "rst" message will start blinking and the normal temperature will be displayed again.

Message	Cause	Outputs
"P1"	Room probe failure	Compressor output according to par. "Con" and "COF"
"P2"	Evaporator probe failure	Defrost end is timed.
"P3"	Condenser probe failure	Outputs unchanged.
"HA"	Maximum temperature alarm	Outputs unchanged.
"LA"	Minimum temperature alarm	Outputs unchanged.
"dA"	Door open	Compressor and fans restart.
"EA"	External alarm	Output unchanged.
"CA"	Serious external alarm (i1F=bAL)	All outputs OFF.
"CSd"	Condenser alarm	All outputs OFF.

6. REPLACEMENT OF MAIN COMPONENTS

6-1. FRONT PANEL PARTS

UNSCREW THE FRONT PANEL



A. LIFT THE PANEL





You can change the door switch, lock main switch and the thermostat here

6-2. REFRIGERATION COMPARTMENT PARTS

6-2-1. UNSCREW THE SENSOR CLIP AND TAKE THE SENSOR OUT FROM THE CLIP



6-2-2. UNSCREW THE CIRCLE FAN COVER



6-2-3. PULL DOWN THE CIRCLE FAN COVER.



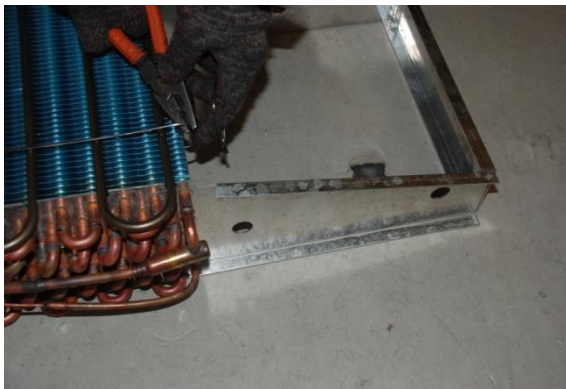
6-2-4. UNSCREW THE FAN SUPPORT



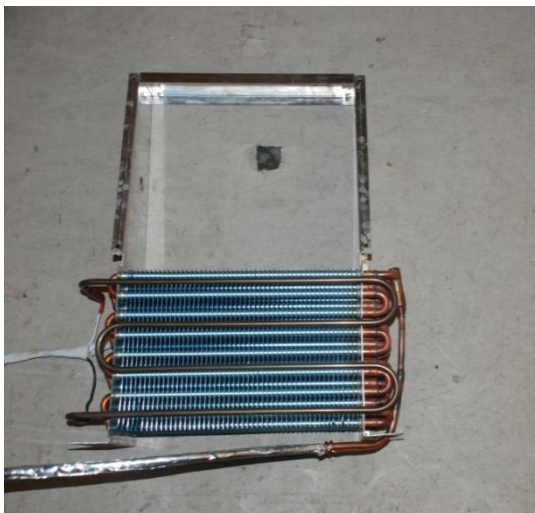


6-2-5. CHANGE THE DEFROST HEATING ELEMENT

- a. UNHOOK THE EVAPORATOR FROM ITS CASING**



- b. TAKE OFF THE ELEMENT AND REPLACE IT.**

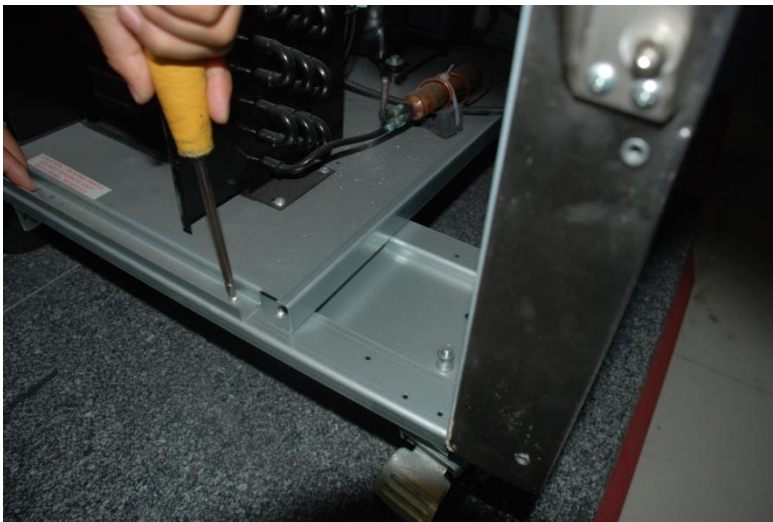


6-3. CONDENSING UNIT

6-3-1. TAKE OFF THE BOTTOM PANEL OF THE UNIT.



6-3-2. UNSCREW THE UNIT BOARD. YOU CAN PULL THE UNIT BOARD OUT FOR ANY REPAIRS OR CLEANING.





CAUTION: BE CAREFUL OF ELECTRIC SHOCK



**CAUTION: MAKE SURE THE POWER SUPPLY IS CUT OFF
BEFORE ANY SERVICE IS PERFORMED**



**CAUTION: CONDENSING UNIT MAY BE VERY HOT. BE SURE
IT IS COOL BEFORE ANY SERVICE IS PERFORMED**